



UNITED STATES PATENT AND TRADEMARK OFFICE

11-02

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777.995	02/12/2004	David Malcolm Camm	SMARB11.001AUS	3328
20995	7590	11/17/2006	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP			WON, BUMSUK	
2040 MAIN STREET			ART UNIT	
FOURTEENTH FLOOR			PAPER NUMBER	
IRVINE, CA 92614			2879	

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/777,995

Applicant(s)

Camm et al.

Examiner

Bumsuk Won

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-144 is/are pending in the application.
- 4a) Of the above claim(s) 1-54, 76-114 and 117-144 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 55-75, 115 and 116 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>06/04, 05/06, 07/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Election/Restrictions***

Applicant's election with traverse of claims 55-75 and 115-116 in the reply filed on 8/28/2006 is acknowledged. The traversal is on the ground(s) that the species are not mutually exclusive species and the examining process is not a serious burden. This is not found persuasive because the inventions as claimed are not obvious variants; and the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect. See MPEP § 806.05(j). For example, the species III is mutually exclusive from other species because a system comprising plurality of apparatuses can be either configured to irradiate a common target or different targets. Also each species requires different search since for example, species I requires to search for specific insulation surrounding flow generator while species II requires to search for specific structure of cathode and anode. Since the search are different for each species, there will be a serious burden for examination. The requirement is still deemed proper and is therefore made FINAL.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested: The apparatus and method for producing electromagnetic radiation having specific insulation surround flow generator.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2879

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 55-63, 66, 69, 75, 115, and 116 are rejected under 35 U.S.C. 102(b) as being anticipated by Nodwell (4,027,185).

Regarding claim 55, Nodwell discloses an apparatus (figs 1, 2, 7) for producing electromagnetic radiation, the apparatus comprising:

an electrically insulated flow generator (27) configured to generate a flow of liquid along an inside surface of an envelope (42); and

first and second electrodes (26, 36) configured to generate an electrical arc within the envelope to produce the electromagnetic radiation (col 2, lines 45-65).

Regarding claim 56, Nodwell discloses electrical insulation surrounding said flow generator (col 5, lines 4-27).

Regarding claim 57, Nodwell discloses the flow generator comprises a conductor (col 4, lines 16-64).

Regarding claim 58, Nodwell discloses the first electrode (26) comprises a cathode (26) and wherein the electrical insulation (col 5, lines 4-27) surrounds the cathode and an electrical connection thereto (25).

Regarding claim 59, Nodwell discloses the electrical connection (25) comprises flow generator (27).

Regarding claim 60, Nodwell discloses the electrical insulation (col 5, lines 4-27) surrounding the flow generator comprises the envelope (42).

Art Unit: 2879

Regarding claim 61, Nodwell discloses the electrical insulation surrounding the flow generator comprises an insulative housing (col 4, lines 5-15).

Regarding claim 62, Nodwell discloses the insulative housing (22) surrounds at least a portion of the envelope (42).

Regarding claim 63, Nodwell discloses the electrical insulation comprises gas () in a space between the insulative housing and the portion of the envelope (col 2, lines 45-65).

Regarding claim 66, Nodwell discloses the envelope is transparent cylindrical tube (col 4, lines 5-15, 52-64).

Regarding claim 69, Nodwell discloses the tube is a hollow cylinder (col 4, lines 50-55). The examiner notes that a precision bore cylindrical tube does not have unobvious difference with the hollow cylinder (42, col 4, lines 50-55), therefore, the claimed limitation is not afforded patentable weight.

Regarding claim 75, Nodwell discloses the insulative housing comprises ceramic (col 4, lines 5-15).

Regarding claim 115, Nodwell discloses an apparatus (figs 1, 2, 7) for producing electromagnetic radiation, the apparatus comprising:

electrically insulated means (27) for generating a flow of liquid along an inside surface of an envelope (42); and

means (26, 36) for generating an electrical arc within the envelope to produce the electromagnetic radiation (col 2, lines 45-65).

Regarding claim 116, Nodwell discloses a method of producing electromagnetic radiation, the method comprising:

Art Unit: 2879

generating a flow of liquid along an inside surface of an envelope (42) using an electrically insulated flow generator (27, col 5, 4-27); and

generating an electrical arc between first and second electrodes (26, 36) to produce the irradiance flash (col 2, lines 45-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 64, 65, 71, and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nodwell (4,027,185) in view of Parfeniuk (6,621,199).

Regarding claim 64, Nodwell discloses all the claimed limitation except for having a pair of spaced apart seals cooperating with an inner surface of the insulative housing and an outer surface of the portion of the envelope to seal the gas in the space.

Parfeniuk discloses an apparatus for producing electromagnetic radiation comprising a pair of seals (fig 1, 106, 87, 114) between housing (110) and envelope (13), for the purpose of sealing the gap between the housing and the envelope.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a pair of seals between housing and envelope disclosed by Parfeniuk in the apparatus disclosed by Nodwell, for the purpose of sealing the gap between the housing and the envelope.

Regarding claim 65, Nodwell discloses the gas is compressed (col 2, lines 45-64).

Art Unit: 2879

Regarding claim 71, Parfeniuk discloses the tube comprises quartz (col 4, lines 42-58).

The reason for combining is as same as claim 64.

Regarding claim 72, Parfeniuk discloses the tube comprises pure quartz (col 4, lines 42-58). The reason for combining is as same as claim 64.

Claims 67 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nodwell (4,027,185) in view of Schenck (5,753,106).

Regarding claims 67 and 68, Nodwell discloses all the claimed limitation except for the thickness of the tube.

Schenck discloses an apparatus (fig 1) for radiation having a cylindrical tube (2) made of quartz having a wall thickness of 5 to 100 mm (col 13, lines 37-64), for the purpose of preventing from overheating (col 13, lines 37-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a thickness of a tube being 5 to 100 mm disclosed by Schenck in the apparatus disclosed by Nodwell, for the purpose of preventing from overheating.

Claim 73 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nodwell (4,027,185) in view of Parfeniuk (6,621,199), in further view of Ashely (5,137,659).

Regarding claim 73, Nodwell in view of Parfeniuk discloses all the claim limitation except for the tube is cerium doped.

Ashely discloses an apparatus in an analogous art using cerium in an housing for radiation emitting device (col 8, lines 16-21), for the purpose of enhancing transparency (col 8, lines 16-21).

Art Unit: 2879

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have cerium disclosed by Ashely in the apparatus disclosed by Nodwell in view of Parfeniuk, for the purpose of enhancing transparency.

Claim 74 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nodwell (4,027,185) in view of Parfeniuk (6,621,199), in further view of Kimble (6,465,799).

Regarding claim 74, Nodwell in view of Parfeniuk discloses all the claim limitation except for the tube is sapphire.

Kimble discloses an apparatus in an analogous art using sapphire in an housing for radiation emitting device (col 6, lines 11-46), for the purpose of enhancing transparency.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have sapphire disclosed by Kimble in the apparatus disclosed by Nodwell in view of Parfeniuk, for the purpose of enhancing transparency.

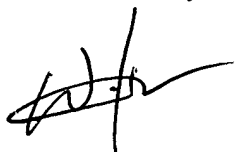
Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bumsuk Won whose telephone number is 571-272-2713. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2879

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Bumsuk Won
Patent Examiner



JOSEPH WILLIAMS
PRIMARY EXAMINER